

ABSTRACT OF THE DISCLOSURE

A method of and an apparatus for measuring and evaluating characteristics of material resin using an injection molding machine. Injections of resin are performed with different resin temperatures T_{Ci} and different injection velocities V_j to detect injection pressures P_r at set screw positions. Data of combinations (P_r , V , T_C) of an N number of injection pressures, injection velocities and resin temperatures are obtained. An interdependency relation function $P_{Vi}(t, v(x), x)$ expressing correlation among the injection pressure, the injection velocity and the resin temperature is obtained as $P_{Vi}(t, v(x), x) = A(x)e^{-\alpha(x)T}v(x)^{\beta(x)}$ according to a least square method using the obtained data, where $\beta(x)$ represents a degree of dependency on injection velocity influencing the injection pressure and " $\log A(x) - \alpha(x)T$ " represents a degree of dependency on resin temperature influencing the injection pressure.